Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A hierarchical traffic management system comprising at least one traffic management node comprising:

a classifier operable to identify and classify incoming traffic streams; and

a queuing system comprising a plurality of queues and operable to apply scheduling policies to said traffic streams, said plurality of queues of the queuing system each comprising:

enqueue attributes configured to control a depth of the queue; and

dequeue attributes configured to control scheduling of the queue, said dequeue attributes comprising minimum bandwidth, maximum bandwidth, excess bandwidth, and priority, wherein each of said plurality of queues has one or more of said dequeue attributes defined;

wherein said plurality of queues define a queue hierarchy, each layer of said queue hierarchy configured to support one or more priority queues and comprising one or more of said queues configured for said minimum bandwidth attribute and one or more of said queues configured for said excess bandwidth attribute;~~ and~~

wherein a first of said plurality of queues comprises a propagated attribute that propagates through said hierarchy from said first queue to a root queue, wherein said propagated attribute applies to said first queue and parent queues of said first queue with respect to traffic associated with said first queue, said priority propagated attribute

comprising a priority propagation attribute which specifies whether or not priority service at a queue is propagated through a hierarchy of the queue; and

wherein a burst tolerance parameter is associated with a stream enabled with priority propagation, the burst tolerance parameter provided for each layer of hierarchy through which priority behavior propagates.

Claim 2 (original): The system of claim 1 wherein the packet scheduling system comprises at least three layers of hierarchy.

Claim 3 (original): The system of claim 1 wherein at least a portion of said plurality of queues have said minimum bandwidth attribute defined.

Claim 4 (original): The system of claim 3 wherein at least a portion of said plurality of queues have said excess bandwidth attribute defined.

Claim 5 (original): The system of claim 1 wherein at least a portion of said plurality of queues have said maximum bandwidth attribute defined.

Claim 6 (original): The system of claim 1 wherein the attributes not defined at each of said plurality of queues have a default value.

Claim 7 (previously presented): The system of claim 1 wherein each of said dequeue attributes are defined for one or more of said plurality of queues.

Claim 8 (original): The system of claim 1 wherein each of said plurality of queues set as a priority queue sends traffic ahead of other queues sharing a parent node.

Claim 9 (original): The system of claim 1 wherein each of said plurality of queues having a defined priority attribute have defined a level of priority.

Claim 10 (previously presented): The system of claim 1 wherein at least some of said queues are configured as conditional or unconditional policers, wherein said conditional policer performs policing conditioned on a congested state of the system and allows said queue to exceed its configured rate if bandwidth is available, and said unconditional policer limits the rate of said queue regardless of the state of the system.

Claim 11 (previously presented): The system of claim 1 wherein each of said plurality of queues is configured to allow for an oversubscription mode in which minimum rates are oversubscribed, wherein allocation of bandwidth to said plurality of queues is user defined.

Claim 12 (original): The system of claim 1 wherein the traffic management node further comprises a pre-queuing operator configured to operate on at least some of said incoming traffic streams before the streams enter the queuing system.

Claim 13 (original): The system of claim 1 wherein the traffic management node further comprises a post-queuing operator configured to operate on at least some of said incoming traffic streams after the streams pass through the queuing system.

Claim 14 (original): The system of claim 13 wherein the post-queuing operator is configured to compress packets.

Claim 15 (previously presented): The system of claim 1 wherein said propagated attribute comprises a minimum-rate propagation attribute.

Claim 16 (previously presented): The system of claim 1 wherein said propagated attribute comprises a priority propagation attribute.

Claim 17 (previously presented): The system of claim 1 wherein the hierarchical traffic management system is located within a network device comprising two or more of the traffic management nodes.

Claim 18 (previously presented): The system of claim 1 further comprising a user interface configured for use with a platform independent common configuration language.

Claim 19 (original): The system of claim 1 wherein the depth of a queue is controlled by a specified maximum queue depth.

Claim 20 (original): The system of claim 1 wherein the depth of a queue is controlled by specification of a Random Early Detection profile.

Claim 21 (currently amended): A method for hierarchical traffic management at a network device having a queuing system comprising a plurality of layers of hierarchy,

each layer of the hierarchy configured for supporting one or more priority nodes and associated with a class, logical interface, or physical interface, one or more nodes having a guaranteed minimum rate, one or more nodes designated for receiving excess bandwidth, and one or more nodes having a defined maximum rate, the method comprising:

classifying incoming traffic streams; and

applying scheduling policies to said traffic streams at one or more queues, said scheduling policies comprising minimum bandwidth, maximum bandwidth, excess bandwidth, and priority, wherein traffic up to a specified bandwidth is defined as priority traffic;

wherein each of said layers is configured to support one or more priority queues and comprises one or more of said queues configured for said minimum bandwidth scheduling policy and one or more of said queues configured for said excess bandwidth scheduling policy; ~~and~~

wherein a first of said plurality of queues comprises a propagated attribute that propagates through said hierarchy from said first queue to a root queue, wherein said propagated attribute applies to said first queue and parent queues of said first queue with respect to traffic associated with said first queue, said priority propagated attribute comprising a priority propagation attribute which specifies whether or not priority service at a queue is propagated through a hierarchy of the queue; and

wherein a burst tolerance parameter is associated with a stream enabled with priority propagation, the burst tolerance parameter provided for each layer of hierarchy through which priority behavior propagates.

Claim 22 (previously presented): The method of claim 21 wherein said one or more of the scheduling policies at said one or more of the queues have default values applied.

Claim 23 (canceled).

Claim 24 (canceled).

Claim 25 (canceled).

Claim 26 (currently amended): The method of claim ~~24~~ 21 wherein the burst tolerance parameter indicates how much the stream is permitted to burst beyond a rate constraint of an ancestral node before the stream becomes constrained by the rate.

Claim 27 (original): The method of claim 21 wherein said propagated attribute comprises a minimum rate propagation attribute which specifies whether or not a minimum rate at a queue is propagated through a hierarchy of the queue.

Claim 28 (original): The method of claim 21 further comprising enabling an oversubscription mode in which oversubscribed streams are reduced in proportion to a specified oversubscription minimum rate.

Claim 29 (currently amended): A computer-readable medium storing computer-executable instructions for hierarchical traffic management at a network device having a queuing system comprising a plurality of layers of hierarchy, each layer of the hierarchy configured for supporting one or more priority nodes and associated with a class, logical interface, or physical interface, one or more nodes having a guaranteed minimum rate, one or more nodes designated for receiving excess bandwidth, and one or more nodes having a defined maximum rate, the instructions comprising:

code that classifies incoming traffic streams; and

code that applies scheduling policies to said traffic streams at one or more queues, said scheduling policies comprising minimum bandwidth, maximum bandwidth, excess bandwidth, and priority, wherein traffic up to a specified bandwidth is defined as priority traffic;

wherein said plurality of queues define a queue hierarchy, each layer of said queue hierarchy configured to support one or more priority queues and comprising one or more of said queues configured for said minimum bandwidth attribute and one or more of said queues configured for said excess bandwidth attribute; ~~and~~

wherein a first of said plurality of queues comprises a propagated attribute that propagates through said hierarchy from said first queue to a root queue, wherein said propagated attribute applies to said first queue and parent queues of said first queue with respect to traffic associated with said first queue, said priority propagated attribute comprising a priority propagation attribute which specifies whether or not priority service at a queue is propagated through a hierarchy of the queue; and

wherein a burst tolerance parameter is associated with a stream enabled with priority propagation, the burst tolerance parameter indicating how much the stream is permitted to burst beyond a rate constraint of an ancestral node before the stream becomes constrained by the rate.

Claim 30 (currently amended): A system for hierarchical traffic management at a network device having a queuing system comprising a plurality of layers of hierarchy, each layer of the hierarchy configured for supporting one or more priority nodes and associated with a class, logical interface, or physical interface, one or more nodes having a guaranteed minimum rate, one or more nodes designated for receiving excess bandwidth, and one or more nodes having a defined maximum rate, the method comprising:

means for classifying incoming traffic streams; and

means for applying scheduling policies to said traffic streams at one or more queues, said scheduling policies comprising minimum bandwidth, maximum bandwidth, excess bandwidth, and priority, wherein traffic up to a specified bandwidth is defined as priority traffic;

wherein said plurality of queues define a queue hierarchy, each layer of said queue hierarchy configured to support one or more priority queues and comprises one or more of said queues configured for said minimum bandwidth attribute and one or more of said queues configured for said excess bandwidth attribute; ~~and~~

wherein a first of said plurality of queues comprises a propagated attribute that propagates through said hierarchy from said first queue to a root queue, wherein said propagated attribute applies to said first queue and parent queues of said first queue with respect to traffic associated with said first queue, said priority propagated attribute comprising a priority propagation attribute which specifies whether or not priority service at a queue is propagated through a hierarchy of the queue; and

wherein a burst tolerance parameter is associated with a stream enabled with priority propagation, the burst tolerance parameter indicating how much the stream is permitted to burst beyond a rate constraint of an ancestral node before the stream becomes constrained by the rate.